PENDING CLAIMS

The pending claims of this application are as follows:

1. **(Currently Amended)** An isolated small interfering RNA (siRNA) comprising a sequence sufficiently complementary to a portion of an HIV genome to mediate RNA interference (RNAi) of the HIV genome portion, wherein the siRNA promotes the degradation of genomic viral HIV RNA during an early viral replication cycle event.

2. **(Original)** The siRNA of claim 1, wherein the siRNA is between about 15 and about 25 nucleotides long.

3. **(Original)** The siRNA of claim 1, wherein the siRNA is between about 20 and about 23 nucleotides long.

4. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is a Long Terminal Repeat (LTR) region.

5. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is a *nef* gene or portion thereof.

6. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is a *vif* gene or portion thereof.

7. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is a *pol* gene or portion thereof.

8. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is a structural gene of the HIV genome or portion thereof, wherein the structural gene is selected from the group consisting of *gag, pol,* and *env*.

9. **(Original)** The siRNA of claim 1, wherein the siRNA is an expressed siRNA.

10. **(Original)** The siRNA of claim 1, wherein the siRNA is a synthetic siRNA.

11. **(Original)** The siRNA of claim 10, wherein the siRNA is a synthetic 21-nucleotide siRNA.

12. **(Original)** The siRNA of claim 1, wherein the siRNA is a short hairpin siRNA (shRNA).

13. **(Original)** The siRNA of claim 1, wherein the siRNA is a short hairpin siRNA (shRNA) expressed from a plasmid.

14. **(Original)** The siRNA of claim 1, wherein the siRNA inhibits synthesis of viral HIV cDNA.

15. **(Original)** The siRNA of claim 1, wherein the siRNA promotes the degradation of or inhibits synthesis of viral HIV cDNA intermediates.

16.-17. **(Cancel)**

18. **(Original)** The siRNA of claim 1, wherein the siRNA mediates RNAi during a late viral replication cycle event.

19. **(Original)** The siRNA of claim 1, wherein the siRNA is generated by endonuclease cleavage of dsRNA.

20. **(Original)** The siRNA of claim 1, wherein the siRNA is modified by the substitution of at least one nucleotide with a modified nucleotide.

21. **(Original)** The siRNA of claim 1, wherein the siRNA has at least one mismatch when compared to the sequence of the HIV genome.

22. **(Cancelled)**

23. **(Withdrawn-Currently Amended)** A method of treating a subject infected with HIV, the method comprising the steps of:

providing an isolated siRNA comprising a sequence sufficiently complementary to a portion of the HIV genome to mediate RNA interference (RNAi), wherein the siRNA promotes the degradation of genomic viral HIV RNA during an early viral replication cycle event; and

initiating RNAi by administering the siRNA to said subject.

24. **(Withdrawn)** The method of claim 23, comprising the step of providing a siRNA complex comprising:

the siRNA comprising a sequence sufficiently complementary to a portion of the HIV genome to mediate RNA interference (RNAi); and

one or more proteins associated with the siRNA that recognize the portion of the HIV genome.

25. **(Withdrawn)** The method of claim 23 comprising the step of providing a siRNA complex comprising the siRNA.

26. **(Withdrawn)** The method of claim 23 comprising the steps of:

analyzing a portion of an HIV genome present in the subject; and

providing an siRNA comprising a sequence sufficiently complementary to the portion of the HIV genome present in the subject to mediate RNAi.

27. **(Withdrawn)** The method of claim 23 comprising the steps of:

analyzing a portion of an HIV genome, for each of a plurality of mutated HIV genomes present in the subject; and

providing one or more siRNAs comprising a sequence sufficiently complementary to the portion of the HIV genome, for each of the plurality of mutated HIV genomes present in the subject.

28. **(Withdrawn- Currently Amended)** A method of inhibiting or preventing HIV replication or infection in a subject, the method comprising the steps of:

providing an isolated siRNA comprising a sequence sufficiently complementary to a portion of the HIV genome to mediate RNA interference (RNAi)), wherein the siRNA promotes the degradation of genomic viral HIV RNA during an early viral replication cycle event; and

administering the siRNA to the subject the siRNA such that HIV replication or infection is inhibited or prevented.

29. **(Withdrawn)** The method of claim 28 wherein the siRNA is expressed from a vector template.

30. **(Withdrawn)** The method of claim 28, wherein viral RNA is degraded in the early stages of replication such that provirus formation is inhibited or prevented.

31. **(Withdrawn)** The method of claim 28, wherein viral RNA is degraded in the late stages of replication such that release of newly formed viral RNA is inhibited or prevented.

32. **(Withdrawn)** The method of claim 28 comprising the steps of:

analyzing a portion of an HIV genome present in the subject; and

providing an siRNA comprising a sequence sufficiently complementary to the portion of the HIV genome present in the subject to mediate RNAi.

33. **(Withdrawn)** The method of claim 28 comprising the steps of:

analyzing a portion of an HIV genome, for each of a plurality of mutated HIV genomes present in the subject; and

providing one or more siRNAs comprising a sequence sufficiently complementary to the portion of the HIV genome, for each of the plurality of mutated HIV genomes present in the subject.

34. **(Withdrawn-Currently Amended)** A method of inhibiting or preventing HIV replication or infection in a cell, the method comprising the steps of:

providing an isolated siRNA comprising a sequence sufficiently complementary to a portion of the HIV genome to mediate RNA interference (RNAi)), wherein the siRNA promotes the degradation of genomic viral HIV RNA during an early viral replication cycle event; and

inhibiting or preventing HIV replication or infection by contacting a cell with the siRNA.

35. **(Withdrawn)** The method of claim 34, wherein the siRNA is expressed from a vector.

36. **(Withdrawn)** The method of claim 34, wherein viral RNA is degraded in the early stages of replication such that provirus formation is inhibited or prevented.

37. **(Withdrawn)** The method of claim 34, wherein viral RNA is degraded in the late stages of replication such that release of newly formed viral RNA from the cell is inhibited or prevented.

38. **(Withdrawn)** The method of claim 34, comprising the step of providing a cell unexposed to the HIV virus.

39. **(Withdrawn)** The method of claim 34, comprising the step of providing a cell comprising less than 500 copies of viral HIV RNA.

40. **(Withdrawn)** The method of claim 34, comprising the step of providing a cell comprising less than 1000 copies of viral HIV RNA prior to contacting the cell with the siRNA.

41. **(Withdrawn)** The method of claim 34, comprising the step of providing a cell exposed to HIV, but wherein the HIV RNA has not integrated into the cell genome.

42. **(Withdrawn)** The method of claim 34, wherein said cell is a lymphocyte.

43. **(Withdrawn)** The method of claim 42, wherein said lymphocyte is a primary peripheral blood lymphocyte.

44. **(Withdrawn)** The method of claim 34, wherein the siRNA is expressed from a vector template *in vivo*.

45.-74. **(Cancelled)**

75. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion encodes a protein expressed in the early stages of HIV replication.

76. **(Previously Presented)** The siRNA of claim 75, wherein the protein functions in provirus formation.

77. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion encodes a protein expressed in the late stages of HIV replication.

78. **(Previously Presented)** The siRNA of claim 77, wherein the protein functions in the release of newly formed viral RNA from a cell.

79. **(Previously Presented)** The siRNA of claim 1, wherein the HIV genome portion is selected from the group consisting of: a gene encoding a structural protein, a gene encoding a regulatory protein, and a gene encoding an accessory protein.

80. **(Previously Presented)** The siRNA of claim 79, wherein the structural protein is selected from the group consisting of Gag, Pol, and Env.

81. **(Previously Presented)** The siRNA of claim 79, wherein the regulatory protein is Tat or Env.

82. **(Previously Presented)** The siRNA of claim 79, wherein the accessory protein is selected from the group consisting of Vpu, Vpr, Vif, or Nef.

83. **(Previously Presented)** This siRNA of claim 1, wherein the HIV genome portion is a highly conserved region of the HIV genome selected from the group consisting of: a *pol* gene or portion thereof, a *tat* gene or portion thereof, a *vif* gene or portion thereof, and a *nef* gene or portion thereof.

84. **(Previously Presented)** The siRNA of claim 9, wherein said expressed siRNA is expressed from a vector.

85. **(Previously Presented)** The siRNA of claim 84, wherein the siRNA is a shRNA.

86. **(Previously Presented)** The siRNA of claim 84, wherein the vector is a plasmid vector.

87. **(Previously Presented)** The siRNA of claim 84, wherein the vector is a viral vector.

88. **(Previously Presented)** The siRNA of claim 84, wherein the vector expresses a plurality of siRNAs comprising sequences sufficiently complementary to portions of the HIV genome.

89. **(Previously Presented)** The siRNA of claim 88, wherein at least one of the siRNAs is a shRNA.

90. **(Previously Presented)** The siRNA of claim 88, wherein the plurality of siRNAs comprise sequences sufficiently complementary to staggered portions of the HIV genome.

91. **(Previously Presented)** The siRNA of claim 88, wherein the plurality of siRNAs comprise sequences sufficiently complementary to different genes in the HIV genome.

92. **(Previously Presented)** The siRNA of claim 88, wherein the plurality of siRNAs comprise at least three sequences sufficiently complementary to one or more highly conserved regions of the HIV genome selected from the group consisting of: a *pol* gene or portion thereof, a *tat* gene or portion thereof, a *vif* gene or portion thereof, and a *nef* gene or portion thereof.

93. **(Previously Presented)** The siRNA of claim 88, wherein the plurality of siRNAs comprise at least five sequences sufficiently complementary to one or more regions of the HIV genome selected from the group consisting of: a region coding for reverse transcriptase, a region coding for protease, a *tat* gene, a *rev* gene, and a *vif* gene.

94. **(Previously Presented)** The siRNA of claim 88, wherein the plurality of siRNAs comprise sequences sufficiently complementary to one or more regions of the HIV genome selected from the group consisting of: a region coding for reverse transcriptase, a region coding for protease, a *tat* gene, a *rev* gene, a *vif* gene, a *gag* gene, a *vpr* gene, a region coding for an envelope protein, a region coding for a capsid protein, and a LTR region.